

WHAT IS CLAIMED IS:

- 1 1. A vehicle hitch assembly for mounting on a vehicle,
2 comprising:
3 a stamped sheet metal cross tube having an elongated shape that
4 extends laterally with respect to the associated vehicle, and the stamped sheet metal
5 cross tube including a central hitch support section as well as including a pair of
6 laterally extending ends that project laterally away from the central hitch support
7 section for mounting on the vehicle;
8 the stamped sheet metal cross tube including a pair of stamped sheet
9 metal members of the same construction as each other, said pair of stamped sheet
10 metal members each having an intermediate portion that projects away from the
11 other stamped sheet metal member so the stamped sheet metal cross tube has a
12 hollow construction, and the pair of stamped sheet metal members each having
13 spaced peripheral flanges that are engaged with and secured to the peripheral flanges
14 of the other stamped sheet metal member; and
15 the central hitch support section of the stamped sheet metal cross
16 tube having a hitch ball support for mounting a hitch ball on the hitch assembly.
- 1 2. A vehicle hitch assembly as in claim 1 further including a pair
2 of vehicle supports that respectively support the pair of laterally extending ends of
3 the stamped sheet metal cross tube on the vehicle.
- 1 3. A vehicle hitch assembly as in claim 2 wherein the pair of
2 vehicle supports have openings that respectively receive the pair of laterally
3 extending ends of the stamped sheet metal cross tube, and further including welds
4 that secure the laterally extending ends of the stamped sheet metal cross tube to the
5 vehicle supports.
- 1 4. A vehicle hitch assembly as in claim 1 central hitch support
2 section of the stamped sheet metal cross tube has a downwardly projecting shape.

1 5. A vehicle hitch assembly as in claim 4 wherein the
2 downwardly projecting shape of the central hitch support section is triangular.

1 6. A vehicle hitch assembly as in claim 1 wherein the central
2 hitch support section of the stamped sheet metal cross tube has a downwardly
3 opening formation, and the hitch ball support being embodied by a hitch receiver
4 tube received within the downwardly opening formation of the central hitch support
5 section and secured thereto by welds.

1 7. A vehicle hitch assembly as in claim 1 wherein the spaced
2 peripheral flanges of the pair of stamped sheet metal members of the stamped sheet
3 metal cross tube include upper and lower peripheral flanges between which the
4 intermediate portions of the stamped sheet metal members extend respectively
5 projecting forwardly and rearwardly with respect to the vehicle away from each
6 other.

1 8. A vehicle hitch assembly as in claim 7 wherein the upper
2 peripheral flanges have straight shapes extending continuously between the ends of
3 the stamped sheet metal cross tube, and the lower peripheral flanges extending along
4 the ends of the stamped sheet metal cross tube and having inner portions that extend
5 downwardly at the central hitch support section and have lower ends that are spaced
6 from each other.

1 9. A vehicle hitch assembly as in claim 8 wherein the central
2 hitch support section of the stamped sheet metal cross tube projects downwardly and
3 has a downwardly opening formation located between the lower ends of the inner
4 portions of the lower peripheral flanges, and the hitch ball support being embodied
5 by a hitch receiver tube that is received within the downwardly opening formation
6 of the central hitch support section and is secured thereto by welds.

1 10. A vehicle hitch assembly as in claim 1 wherein the central
2 hitch support section of the stamped sheet metal cross tube has a downwardly
3 opening formation, and the hitch ball support being embodied by a hitch receiver

4 tube received within the downwardly opening formation of the central hitch support
5 section and secured thereto by welds, and an auxiliary chain connector including a
6 connection plate welded to the central hitch support section.

1 11. A vehicle hitch assembly as in claim 10 wherein the
2 connection plate has a horizontal portion welded to both the central hitch support
3 section and to the hitch receiver tube, and the connection plate having an inclined
4 portion extending downwardly to the rear from the horizontal portion and having a
5 pair of auxiliary chain connection openings.

1 12. A vehicle hitch assembly as in claim 1 wherein the spaced
2 peripheral flanges of the pair of stamped sheet metal members of the stamped sheet
3 metal cross tube include front and rear peripheral flanges between which the
4 intermediate portions of the stamped sheet metal members extend respectively
5 projecting upwardly and downwardly away from each other.

1 13. A vehicle hitch assembly as in claim 12 wherein the front and
2 rear peripheral flanges have straight shapes extending between the ends of the
3 stamped sheet metal cross tube and the central hitch support section.

1 14. A vehicle hitch assembly as in claim 13 wherein the central
2 hitch support section of the stamped sheet metal cross tube projects rearwardly to
3 provide the hitch ball support which is embodied as a hitch receiver tube.

1 15. A vehicle hitch assembly as in claim 1 wherein the rear
2 flanges of the pair of stamped sheet metal members have inner ends at the central
3 hitch support section and an auxiliary chain connector including connector holes in
4 the inner ends of the rear flanges.

1 16. A vehicle hitch assembly for mounting on a vehicle,
2 comprising:

3 a stamped sheet metal cross tube having an elongated shape that
4 extends laterally with respect to the associated vehicle, and the stamped sheet metal

5 cross tube including a central hitch support section as well as including a pair of
6 laterally extending ends that project laterally away from the central hitch support
7 section for mounting on the vehicle;

8 the stamped sheet metal cross tube including a pair of stamped sheet
9 metal members of the same construction as each other, said pair of stamped sheet
10 metal members each having an intermediate portion that projects away from the
11 other stamped sheet metal member so the stamped sheet metal cross tube has a
12 hollow construction, and the pair of stamped sheet metal members each having
13 spaced peripheral flanges that are engaged with and secured to the peripheral flanges
14 of the other stamped sheet metal member;

15 the central hitch support section of the stamped sheet metal cross
16 tube having a hitch ball support for mounting a hitch ball on the hitch assembly; and

17 a pair of vehicle supports that respectively support the pair of
18 laterally extending ends of the stamped sheet metal cross tube on the vehicle.

1 17. A vehicle hitch assembly for mounting on a vehicle,
2 comprising:

3 a stamped sheet metal cross tube having an elongated shape that
4 extends laterally with respect to the associated vehicle, and the stamped sheet metal
5 cross tube including a downwardly projecting central hitch support section as well
6 as including a pair of laterally extending ends that project laterally away from the
7 central hitch support section for mounting on the vehicle;

8 the stamped sheet metal cross tube including a pair of front and rear
9 stamped sheet metal members of the same construction as each other, said pair of
10 stamped sheet metal members each having an intermediate portion that projects
11 horizontally away from the other stamped sheet metal member so the stamped sheet
12 metal cross tube has a hollow construction, and the pair of stamped sheet metal
13 members each having spaced upper and lower peripheral flanges that are engaged
14 with and secured to the upper and lower peripheral flanges of the other stamped
15 sheet metal member;

16 the downwardly projecting central hitch support section of the
17 stamped sheet metal cross tube having a hitch ball support embodied by a hitch
18 receiver tube for mounting a hitch ball on the hitch assembly;

19 an auxiliary chain connector including a connection plate welded to
20 the downwardly projecting central hitch support section and to the hitch receiver
21 tube, and the connection plate including a pair of auxiliary chain connection
22 openings; and

23 a pair of vehicle supports having openings that respectively receive
24 the pair of laterally extending ends of the stamped sheet metal cross tube to provide
25 support thereof on the vehicle, and welds that secure the laterally extending ends
26 of the stamped sheet metal cross tube to the pair of vehicle supports.

1 18. A vehicle hitch assembly for mounting on a vehicle,
2 comprising:

3 a stamped sheet metal cross tube having an elongated shape that
4 extends laterally with respect to the associated vehicle, the stamped sheet metal cross
5 tube including a downwardly projecting central hitch support section having a
6 downwardly opening formation, and the stamped sheet metal cross tube including
7 a pair of laterally extending ends that project laterally away from the central hitch
8 support section for mounting on the vehicle;

9 the stamped sheet metal cross tube including a pair of stamped sheet
10 metal members of the same construction as each other, said pair of stamped sheet
11 metal members each having an intermediate portion that projects away from the
12 other stamped sheet metal member so the stamped sheet metal cross tube has a
13 hollow construction, and the pair of stamped sheet metal members each having
14 spaced upper and lower peripheral flanges that are engaged with and secured by
15 welds to the upper and lower peripheral flanges of the other stamped sheet metal
16 member, the upper peripheral flanges having straight shapes extending continuously
17 between the ends of the stamped sheet metal cross tube, and the lower peripheral
18 flanges extending along the ends of the stamped sheet metal cross tube and having
19 inner portions that extend downwardly at the central hitch support section and have
20 lower ends that are spaced from each other with the downwardly opening formation
21 of the central hitch support section therebetween;

22 the central hitch support section of the stamped sheet metal cross
23 tube having a hitch ball support embodied by a hitch receiver tube received within
24 the downwardly opening formation of the central hitch support section between the

25 lower ends of the inner portions of the lower peripheral flanges and having welds
26 thereto so as to mount a hitch ball on the hitch assembly;

27 an auxiliary chain connector including a connection plate having a
28 horizontal portion welded to both the downwardly projecting central hitch support
29 section and to the hitch receiver tube, and the connection plate having an inclined
30 portion welded to the hitch receiver tube and extending downwardly to the rear from
31 the horizontal portion and having a pair of auxiliary chain connection openings; and

32 a pair of vehicle supports having openings that respectively receive
33 the pair of laterally extending ends of the stamped sheet metal cross tube to provide
34 support thereof on the vehicle, and welds that secure the laterally extending ends
35 of the stamped sheet metal cross tube to the pair of vehicle supports.

1 19. A vehicle hitch assembly for mounting on a vehicle,
2 comprising:

3 a stamped sheet metal cross tube having an elongated shape that
4 extends laterally with respect to the associated vehicle, and the stamped sheet metal
5 cross tube including a rearwardly projecting central hitch support section as well as
6 including a pair of laterally extending ends that project laterally away from the
7 central hitch support section for mounting on the vehicle;

8 the stamped sheet metal cross tube including a pair of upper and
9 lower stamped sheet metal members of the same construction as each other, said pair
10 of stamped sheet metal members each having an intermediate portion that projects
11 vertically away from the other stamped sheet metal member so the stamped sheet
12 metal cross tube has a hollow construction, and the pair of stamped sheet metal
13 members each having spaced front and rear peripheral flanges that are engaged with
14 and secured to the front and rear peripheral flanges of the other stamped sheet metal
15 member;

16 the rearwardly projecting central hitch support section of the stamped
17 sheet metal cross tube including a hitch ball support which is embodied by a hitch
18 receiver tube for mounting a hitch ball on the hitch assembly;

19 an auxiliary chain connector embodied by connector including a
20 connection plate welded holes in inner ends of the rear flanges of the upper and
21 lower stamped sheet metal members; and

22 a pair of vehicle supports having openings that respectively receive
23 the pair of laterally extending ends of the stamped sheet metal cross tube to provide
24 support thereof on the vehicle, and welds that secure the laterally extending ends
25 of the stamped sheet metal cross tube to the pair of vehicle supports.

1 20. A vehicle hitch assembly for mounting on a vehicle,
2 comprising:

3 a stamped sheet metal cross tube having an elongated shape that
4 extends laterally with respect to the associated vehicle, the stamped sheet metal cross
5 tube including a rearwardly projecting central hitch support section, and the stamped
6 sheet metal cross tube including a pair of laterally extending ends that project
7 laterally away from the central hitch support section for mounting on the vehicle;

8 the stamped sheet metal cross tube including a pair of upper and
9 lower stamped sheet metal members of the same construction as each other, said pair
10 of stamped sheet metal members each having an intermediate portion that projects
11 vertically away from the other stamped sheet metal member so the stamped sheet
12 metal cross tube has a hollow construction, the pair of stamped sheet metal members
13 each having spaced front and rear peripheral flanges that are engaged with and
14 secured by welds to the front and rear peripheral flanges of the other stamped sheet
15 metal member, the front peripheral flanges extending continuously between the ends
16 of the stamped sheet metal cross tube, and the rear peripheral flanges extending
17 along the ends of the stamped sheet metal cross tube and having inner ends at the
18 central hitch support section;

19 the rearwardly projecting central hitch support section of the stamped
20 sheet metal cross tube including a hitch ball support which is embodied by a hitch
21 receiver tube located between the inner ends of the rear peripheral flanges;

22 an auxiliary chain connector embodied by connector holes in the inner
23 ends of the rear flanges of the upper and lower stamped sheet metal members; and

24 a pair of vehicle supports having openings that respectively receive
25 the pair of laterally extending ends of the stamped sheet metal cross tube to provide
26 support thereof on the vehicle, and welds that secure the laterally extending ends
27 of the stamped sheet metal cross tube to the pair of vehicle supports.